

2. *Reports on the Marine Mollusca in the Collections of the South African Museum.*—By J. R. LE B. TOMLIN, M.A.

II. FAMILIES ABYSSOCHRYSIDAE, OÖCORYTHIDAE,
HALIOTIDAE, TONNIDAE.

(With four Text-figures.)

ABYSSOCHRYSIDAE, fam. nov.

THIS splendid and remarkable mollusc, from a depth of 900 to 1000 fathoms, seems to have a combination of characters which justify one in creating a new family for its reception.

The shell has the form and ornamentation of a Thiarid of the

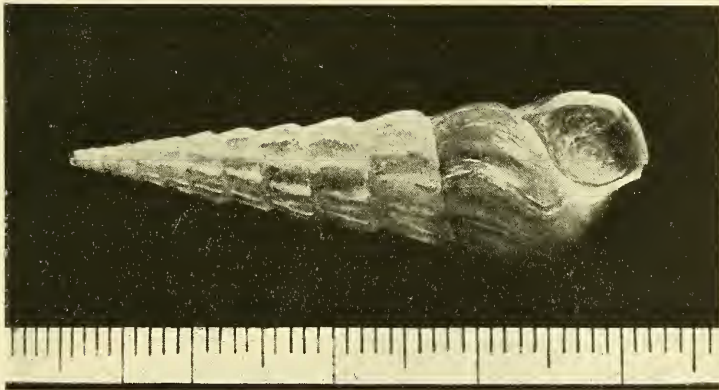


FIG. 1.—*Abyssochrysos melanioides*, gen. and sp. nov.

Melanioides group, resembling especially some of the varieties of *T. variabilis* (Benson); the operculum much resembles that of *Littorina* and *Thiara*, but is thinner, and has a more central nucleus; there is a smooth, glossy periostracum of a rather pale brownish-golden colour; the radula is taenioglossate in character, but remarkably asymmetrical in the same specimen as regards the rhachidian cusps, which seem to follow no law whatever.

I propose to call it :

Abyssochrysos melanioides, gen. and sp. nov.

Shell elongately turreted, covered with a pale, brownish-golden periostracum ; all the specimens are decollate, number of whorls remaining in the type 13 ; the shell is furnished longitudinally with straight, prominent, distant ribs, and probably spirally grooved throughout, but through the periostracum one only sees about 4 lirae with broader, flat interstices immediately above the suture ; in the type these lirae are unusually indistinct ; the upper part of each whorl, some way below the suture, is encircled by a raised line, which forms rather acute prominences where it crosses the axial ribs ;



FIG. 2.—*Abyssochrysos melanioides*, I, II, two aspects of anterior portion of animal, enlarged ; *f*, foot ; *p*, penis ; *tt*, tentacles ; *o*, plane of operculum. III, operculum.

all the spiral sculpture varies much in degree ; suture impressed ; the base of the last whorl appears to be rather irregularly spirally grooved throughout ; umbilicus none ; aperture subcircular ; operculum thin, transparent, 4-whorled, less closely coiled than in a *Littorina*, pale reddish-brown in colour.

Long., 41 mm. ; diam. max., 12.

Aperture, long., 9 mm. ; lat., 6.5.

For the following report I am greatly indebted to Lt.-Colonel Peile, and I give it verbatim. The drawings of the animal and of details of radula are also his. I am equally indebted to Mr. A. E. Salisbury for the photograph of the shell with the operculum.

“ The animal has well-developed tentacles but no eyes.

“ There is a buccal armature consisting of two lateral lobes, each of gnat-wing shape ; they appear to be composed of crowded conical processes, which form also a serrated margin on the working edge of the lobe.

“ The radula is taenioglossate, with formula 2.1.1.1.2. That of the

figured specimen has 119 rows (+nascent), and measures 3.5 mm. in length. Three specimens were stained with dahlia and mounted in Canada balsam; they agree as regards one striking peculiarity, namely, the variation in the number of cusps on the rachidians.



FIG. 3.—*Abyssochrysos melanioides*. South African Museum, No. 139/A5116. Radula: approximate magnification $\times 250$. Four successive rachidians, lateral and marginals.

This appears to follow no law, the side cusps varying in number from 2 to 4. The arrangement 3.1.3 predominates in the figured specimen with many 2.1.3 and 3.1.2; in one of the other specimens a combination with 4 on one side or the other occurs more frequently.

“ Taking two portions of the figured specimen we find :

3.1.2	2.1.2	
3.1.2	3.1.3	
2.1.3	3.1.3	}
2.1.3	2.1.4	
3.1.3	2.1.2	
3.1.3	4.1.3	
4.1.3	3.1.3	
? 2.1.3	3.1.4	
3.1.4 ?	2.1.3	
2.1.3	3.1.3	
2.1.2	3.1.4	

“ Where 2 cusps only occur they are broader, and where 4 occur they are narrower than the average size.”

Hab., Cape Point, N.E. \times E. $\frac{1}{4}$ E., 46 miles, 900 to 1000 fathoms, several live specimens (S.A. Mus., No. A5116).

Type in South African Museum.

OÖCORYTHIDAE.

The name of this family should, by its derivation from *κόρυς*, a helmet, be spelt as given by Fischer,* and not Oöcoritidae as Dall † has written.

It was first made known in 1883 ‡ from the dredgings of the "Talisman" off the Azores, in from 2285 to 5005 metres, and the same species has been dredged by the "Blake" off Guadeloupe, St. Vincent, and Grenada in the West Indies, at depths varying from 573 to 955 fathoms.

Dall (*loc. cit.*) says, "In this singular mollusk we have another instance of the comparatively limited value of the form of the operculum, or even its presence.

"*Tritonium* (*i.e.* *Cymatium*), *Cassis*, *Dolium* (*i.e.* *Tonna*), *Oöcorys* are all nearly related, yet the operculum is absent in one group, and in the others assumes most varied forms. By its dentition, its nucleus, and its thickened reflected lip and body callus it approaches *Cassis* more nearly than *Dolium*."

Locard § also gives a very full study of the group, and would be content to include *Oöcorys* as a genus of the Cassididae. It seems better, however, to maintain the Oöcorythidae as a separate family on an equal footing with the Cassididae, Tonnidae, and Cymatiidae.

Two specimens of an *Oöcorys* are amongst the Museum dredgings, both dead shells from 40 miles off Cape Point, 720 to 900 fathoms.

They obviously belong to the same species as the single "Challenger" example, with which I have been able to compare them, and which was dredged in mid-Atlantic a little north of the Equator.

In the "Challenger" Report Boog Watson identified this specimen with *O. sulcata* Fischer, though Fischer himself dissented, and though Watson acknowledges differences in sculpture; these, however, he attributes to greater age and worse condition.

Locard (*loc. cit.*) follows Fischer in discriminating the "Challenger" shell from that of the "Talisman," and proposes to call the former *O. watsoni*, recapitulating the differences which also struck Fischer. I have not seen a specimen of Fischer's *sulcata*, but as far as one can judge by figures and descriptions the discrimination is justified, and the Cape shell may stand as *O. watsoni* Locard.

* Man. Conch., p. 769.

† Bull. Mus. Comp. Zool., Harvard, xviii, p. 228.

‡ Journ. de Conch., xxxi, p. 392.

§ Exp. Sci. Travailleur et Talisman, Moll. I, p. 288.

Dautzenberg and Locard are inclined to surmise that another "Challenger" shell which Watson denominates *Buccinum? aquilorum* should be referred likewise to *Oöcorys*. It may, therefore, be not superfluous to mention that a short time ago I found the unique type of this species—after considerable search in the British Museum collections—included in the family of Cancellariidae.

An examination of the specimen convinces me that Smith was perfectly correct in so assigning it, and that it probably belongs to the genus *Admete*.

HALIOTIDAE.

Haliotis alfredensis Bartsch. U.S. Nat. Mus., Bull. 91, p. 175,
pl. xxiv, figs. 7, 8, 28th July 1915.

Hab., The Kowie (the type locality).

Sowerby, in Proc. Malac. Soc., iv, p. 6, recorded what is evidently this species from The Kowie as *H. pertusa* Reeve; and Smith repeated Sowerby's record, *op. cit.*, v, p. 391.

Comparison with the type of *pertusa* Rve. shows that the Kowie shell is much more finely and regularly sculptured, as Bartsch points out, and must be known as *H. alfredensis* Bartsch.

TONNIDAE.

TONNA GALEA (L.).

Buccinum galea L. Syst. Nat., ed. 10, i, p. 734, 1758.

Hab., Algoa Bay, 29 fathoms, one much broken dead shell, which I refer to this species. It is a common Mediterranean shell, and occurs on the American side of the Atlantic from N. Carolina to Brazil.

TONNA LUTEOSTOMA (Küster).

Dolium luteostomum Küster. Syst. Conch. Cab. (2), Lief. 158,
p. 66, pl. lviii, fig. 2, 1857.

Hab., two dead shells from 34 fathoms off Cove Rock. The Kimberley Museum has three which were trawled off East London.

D. procellarum Euthyme (unfigured),* from "Sainte Elisabeth," is probably the same.

* Bull. Soc. Malac. France, ii, p. 247, December 1885.

EUDOLIUM CROSSEANUM (Monterosato).

Dolium crosseanum Monterosato. Journ. de Conch., xvii, p. 228,
pl. xii, fig. 1, July 1869.

Hab., Buffalo River, N. 15 miles, 310 fathoms. One dead, somewhat immature shell only was dredged, measuring 33 mm. by 24 mm., but I do not think there can be any doubt as to its identity.

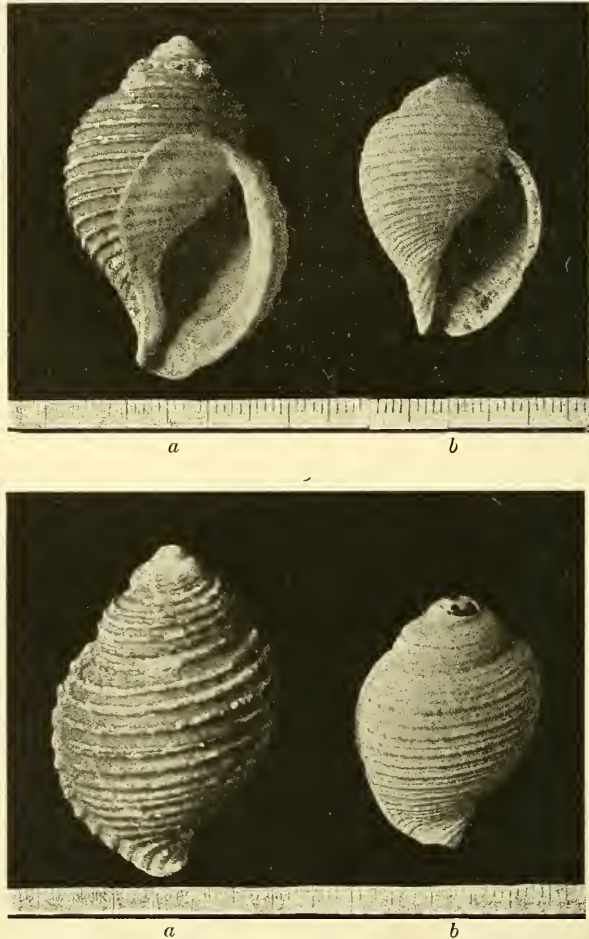


FIG. 4. (a) *Eudolium aulacodes*, n. sp. (b) *Eudolium crosseanum* (Monts.).

The species has an enormous range. It was first taken in deep water off Palermo, has been dredged on the Atlantic coast of the

U.S.A. as far north as Martha's Vineyard in 89 to 234 fathoms, and was taken by the "Blake" at various stations in the West Indies.

The Cape example, of which I give a figure, might almost have been the original of the figure in Bull. Mus. Comp. Zool., Harvard, xviii, pl. xv, fig. 5, but the shell depicted by Dall was 2 mm. longer. Monterosato's Palermo specimen measured 81×56 ; this seems to have been a particularly fine one, and Dall mentions that most of the Antillean shells are smaller though adult.

Eudolium aulacodes,* sp. n.

Shell remarkably solid and heavy, imperforate, pale ochreous in colour; whorls $5\frac{1}{2}$, sculptured with very strongly raised ridges, of which there are 17 on the body whorl, 6 on the penultimate, and 5 on the antepenultimate—the ridges being very regular and equal in size except that immediately above the suture, which is weak and threadlike; the ridges are separated by wide interstices, and regularly spaced except two infra-peripheral ones, which are obviously much closer together (this may prove to be an individual peculiarity when further specimens turn up); analogously the ridge which I take to be the periphery is deeply furrowed, and this feature can be traced back to the antepenultimate whorl; the first 2 whorls are more or less decorticate, on the third the interstices are crossed very obliquely by numerous axial threads; otherwise the interstices are smooth; canal rather long and broad; outer lip much thickened and reflected, the ridges of the body whorl forming blunt raised denticles on the outer edge, and marked on the inner margin by faint, shallow channeling; on body whorl and pillar is an extensive auriform callus which projects over part of the next whorl; aperture elongate piriform.

Long., 43 mm.; diam. max., 29; length of aperture, 21.

Hab., Cape Point, N.E. 40 miles, 560 to 700 fathoms, one dead but fresh shell (Mus. No. A3529).

Type in South African Museum.

Not unlike *E. verrilli* Dall, but more elongate both in spire and canal, and without canaliculation at the suture.

* ἀλακώδης, "in furrows."